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10/587,918	05/10/2007	Arved H. Westerkamp	VOI0370.US	3651

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EXAMINER

HUG, ERIC J

ART UNIT	PAPER NUMBER
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1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,918	Applicant(s) WESTERKAMP, ARVED H.	
	Examiner Eric Hug	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2006 and 10 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37-72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 64-69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 64, which depends on claim 50, recites the limitation "said textile areal structure".

There is insufficient antecedent basis for this limitation in the claim.

Claim 65, which depends on claim 50, recites the limitation "said non-textile areal structure". There is insufficient antecedent basis for this limitation in the claim. Claims 66-69 are accordingly rejected as being dependent on claim 65.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 37-44, 46, 47, 50-58, 62-63, and 70-72 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (US 6,569,290).

Johnson discloses a modular papermaking fabric comprising a modular link base (10) and an attached modular surface plate component (100). The surface plate component forms a paper

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support surface upon the link base. See Figures 1-3. The link base comprises a plurality of link components, each interconnected to at least one other link component. See Figure 6. Preferably, each link base component has an attached surface plate component (column 4, lines 13-14).

Each link base component and surface plate component is made to have predetermined characteristics such as open area, contact area, permeability, and surface finish, so that when the surface plate component is attached to the link base component, a combined effect of fabric characteristics is obtained. The characteristics are determined based on machine and product demands. See, for instance, column 4, lines 7-10 and 16-41, and column 5, line 44 to column 6, line 5.

Regarding independent claim 37, the construction of the fabric of Johnson using components of different characteristics is equivalently a method for the modular production of coverings of different categories. The fabric is for use in a paper machine. Providing the components as taught by Johnson is equivalently prefabricating a construction kit of web-shaped material layers and selecting a plurality of the web-shaped material layers depending on a category and operating condition of the covering to be produced. The arrangement and attachment of link base components and surface plate components are equivalently stacking the web-shaped material layers atop one another and joining the web-shaped material layers to one another in sections, two-dimensionally, and in a manner that prevents said web-shaped material layers from being detached.

Regarding claim 38, see the portions of Johnson indicated above corresponding to choosing materials and patterns for the modules, and stacking the modules depending on the functional characteristics desired for the fabric and on paper machine operating conditions.

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Regarding claims 39-44, 46 and 47, each of the claimed means of attachment are taught in column 6, lines 6-14. Johnson discloses the use of adhesives, ultrasonic welding, snap-locks, or pintle mounts, which encompasses the claimed features.

Regarding independent claim 50, the modular fabric of Johnson is equivalently a covering for use in a paper machine. The modular components of the fabric are equivalently a construction kit including a plurality of prefabricated web-shaped material layers. Each of the modular components can be configured dependent upon a category and operating conditions of the covering. The arrangement and attachment of components are equivalently a plurality of prefabricated web-shaped material layers being stacked atop one another and joined to one another at least in sections, two-dimensionally, and in a manner that prevents the plurality of prefabricated web-shaped material layers from being detached.

Regarding claims 51-53, see the portions of Johnson indicated above corresponding to choosing materials and patterns for the modules, and stacking the modules depending on the functional characteristics desired for the fabric and on paper machine operating conditions.

Regarding claims 54-58, the surface plate (100) is a layer which influences the surface of a fibrous web, and the link base is a wear-stable and dimensional-stable material layer. Both layers are non-textile layers.

Regarding claims 62-63, link base modules can be molded with permeability and flow control (col. 5, lines 50-54), which encompasses anti-rewetting functionality. These modules are non-textile structures.

Regarding claims 70-72, each of the claimed means of attachment are taught in column 6, lines 6-14. Johnson discloses the use of adhesives, ultrasonic welding, snap-locks, or pintle

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mounts, depending on the desired characteristics of the fabric. The modules are offset in both the machine direction and transverse direction, and joined together two-dimensionally. See Figure 6.

3. Claims 37-44, 48-66, 70, and 71 are rejected under 35 U.S.C. 102(b) as being anticipated by Legge (US 4,781,967).

Legge discloses a papermaker's press felt having a plurality of modular structures which include layers of yarn arrays and fibrous batt materials. Each modular structure is capable of having distinct chemical or physical treatments applied thereto. Figures 1-4 show different embodiments of a press felt with the component layers separated. The fibrous batt layers and yarn arrays are positioned one over the other and united together to form the felt. The fibrous batt layers and the yarn arrays can be united by techniques such as by needling or by using an adhesive or a hot melt resin in particle, fiber, sheet or spray form. See column 5, lines 1-12. Any of the modular yarn assemblies that consist of a batt or web and yarn array can be constructed of certain specified materials which would give predetermined physical properties to the felt. See column 8, lines 13-61. Advantages of the modular configuration include improved dimensional stability and the capability of using individual chemical or physical treatments to one or more layers without affecting the other fiber modules.

Regarding independent claim 37, the construction of the felt of Legge using component layers of different characteristics is equivalently a method for the modular production of coverings of different categories. The press felt for use in a press section of a paper machine. Providing the component layers as taught by Legge is equivalently prefabricating a construction

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kit of web-shaped material layers and selecting a plurality of the web-shaped material layers depending on a category and operating condition of the covering to be produced. The arrangement and attachment of the component layers are equivalently stacking the web-shaped material layers atop one another and joining the web-shaped material layers to one another in sections, two-dimensionally, and in a manner that prevents said web-shaped material layers from being detached.

Regarding claim 38, see the portions of Legge indicated above corresponding to choosing materials for the modules, and for layering (stacking) the modules depending on the functional characteristics desired for the fabric and on paper machine operating conditions.

Regarding claims 39-44, the joining technique of using an adhesive or hot resin reads on these claimed features.

Regarding claims 48 and 49, the joining technique of needling reads on these claimed features.

Regarding independent claim 50, the press felt of Legge is equivalently a covering for use in a paper machine. The component layers of the fabric are equivalently a construction kit including a plurality of prefabricated web-shaped material layers. Each of the component layers can be configured dependent upon a category and operating conditions of the covering. The arrangement and attachment of component layers are equivalently a plurality of prefabricated web-shaped material layers being stacked atop one another and joined to one another at least in sections, two-dimensionally, and in a manner that prevents the plurality of prefabricated web-shaped material layers from being detached.

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Regarding claims 51-53, see Figures 1-4 and the portions of Legge indicated above corresponding to choosing materials for the modules, and for layering (stacking) the modules depending on the functional characteristics desired for the fabric and on paper machine operating conditions.

Regarding claims 54-58, batt layers (e.g., 35, 36, 37 in Figure 1) are layers which influences the surface of a fibrous web. The yarn arrays (e.g. 14, 16 in Figure 1) are wear-stable and dimensional-stable material layers. Both are textile layers.

Regarding claims 59-61, the batt layers influence the liquid absorbing capacity of the felt. Batt layers absorb water removed from a paper web when passed through a press nip.

Regarding claims 62-63, Legge discloses that the felt is constructed to "readily accept water, hold it in the void areas of the felt, and quickly release it from the backside of the felt", see column 1, lines 44-61. This is effectively an anti-rewet construction.

Regarding claim 64, yarns arrays made have a weave structure. See layer 94 in Figure 4.

Regarding claims 65-66, see column 8, line 62 to column 9, line 8 describing the use of an extruded polymeric resin (equivalently the claimed structured film).

Regarding claims 70-71, the joining techniques of needling and/or using an adhesive or hot resin reads on these claimed features.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 45 and 67-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Legge (US 4,781,967) in view of Luciano (US 4,357,386).

The modular press felt of Legge is described above. Regarding claim 45, Legge does not disclose providing a foamed material between joined material layers. Regarding claims 66-67, Legge does not disclose providing a non-textile areal structure that is a foamed layer.

Luciano discloses a paper machine press felt comprising a textile base layer, a paper side batt layer (covering layer of nonwoven staple fibers), and an intermediate layer formed from a polymeric resin foam. The foam layer has a porosity and void volume which enhances water removal from a paper sheet in a press nip. The foam layer also provides advantages in several physical properties of the felt, as described in column 2, lines 1-22, including air permeability which is a measure of porosity. At the time of the invention, it would have been obvious to one skilled in the art to provide the press felt of Legge with a foam layer as taught by Luciano to obtain the same advantages.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references disclose papermaking fabrics constructed from modular structures.

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Albert (US 4,541,895)

Shipley (US 5,879,777)

Baker (US 6,124,015)

Jeffrey (US 6,436,240)

Hyvonen (US 6,797,121)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is (571) 272-1192.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric Hug/
Primary Examiner, Art Unit 1791